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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/164,392 09/30/98 KIM

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EXAMINER

LANEAU, R

ART UNIT

PAPER NUMBER

2774

DATE MAILED:

08/24/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/164,392

Applicant(s)

DONG-GYU KIM

Examiner

Ronald Laneau

Group Art Unit

2774



☒ Responsive to communication(s) filed on Jul 26, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-16 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-16 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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Response to Amendment

1. The amendment filed on 7/26/00 has been entered. No new claims are added and claims 1-16 are still pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al (5,724,057).

As per claim 1, Kimura discloses a method for driving a liquid crystal display. It has a common electrode driving section and a pixel electrode comprising applying common voltage to common electrodes (22, 20), applying data voltage and common voltage of a positive polarity and a negative polarity to liquid crystal 18 as claimed (see column 9, lines 45-67). Further, Kimura et al disclose a polarity of the data applied to the liquid crystal, even when the designated contrast is relatively high and the amplitude of the data is relatively small, and even when the designated contrast is relatively low and the amplitude of the data is relatively large. Kimura does not disclose a polarity of the data voltage applied to the pixels in the group but it would have been obvious to one of ordinary skill in the art to utilize the polarity of the data taught by Kimura as claimed because it would

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prevent the generation of flicker even when the contrast of the displayed image is changed (see col. 4, lines 33-35).

As per claims 2, and 3, the pixel as taught by Kimura is inherently comprised of three pixel which are a red pixel, a green pixel, and a blue pixel as claimed.

As per claims 4, and 5, the application of data voltages with the same polarity for the common voltage is applied to the pixels in the same column as claimed.

As per claims 6, 11, and 12, Kimura discloses a substrate, a plurality of gate lines (30) formed on the substrate, a plurality of data lines intersecting the gate lines (see figure 2), a plurality of pixels formed to regions defined by the data lines and the gate lines (see figure 2), and wherein the polarity of the data voltage for the common voltage inverts. Kimura does not teach inversion in units of groups comprising of two or more pixels and having a connecting member formed between the gate lines or connecting the common lines but it would have been obvious to one of ordinary skilled in the art to utilize the pixels in groups because it would prevent pixel defects by utilizing them in group than singularly.

As per claims 7, and 8, see rejection of claim 6. the pixel as taught by Kimura et al is inherently comprised of three pixel which are a red pixel, a green pixel, and a blue pixel as claimed.

As per claims 9, and 10, see rejection of claim 6. It is common or well known in the art to specify a certain amount of distance between a first data line and a second data line because there has to be some distances if one wants to differentiate the data lines.

As per claims 13-15, Kimura discloses a common voltage which is applied through a common voltage on the substrate. As far as the connecting member, see rejection of claim 6.

As per claim 16, Kimura definitely discloses a pixel comprising a column of red pixel, a column of green pixels and a column of blue pixels as claimed.

Response to Arguments

4. Applicant's arguments filed on 7/26/00 have been fully considered but they are not persuasive.

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As to claims 1-5, applicant argues that Kimura neither discloses nor suggests applying a data voltage alternatively to groups of a plurality of pixels. Contrary to applicant's arguments, Kimura does disclose a polarity of the data voltage that could be applied to groups of a plurality of pixels as claimed. As per claims 6-16, applicant argues that Kimura does not disclose inversion in units of groups. Contrary to applicant's arguments, the Examiner still believes that the obviousness statement taken in claim 6 would take care of the missing element in Kimura. Therefore, the rejection stands.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. **Any response to this final action should be mailed to:**

Box AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

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(703) 308-9051, (for formal communications; please mark "EXPEDITED PROCEDURE")

Or:

(703) 305-308-6606, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Laneau whose telephone number is (703) 305-3973. The examiner can normally be reached on Monday-Friday from 8:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Ronald Laneau

August 22, 2000



RICHARD A. HJERPE
SUPERVISORY PATENT EXAMINER
GROUP 2700